MOBATIME

SWISS TIME SYSTEMS

ANALOGUE OUTDOOR CLOCK

METROLINE

An attractive range of outdoor clocks in aluminum lightweight housing, conceived in a modular design adequate for outdoor applications including metros/railways. The most up-to-date technology guarantees reliable operation and maximum accuracy.

6 STEPS TO YOUR METROLINE

To make sure your Metroline meets all your requirements, you can assemble the components individually. Naturally, our experts will be happy to help.

1. *Are you looking for an illuminated clock?*

ILLUMINATION

The Metroline is available with or without illumination:

CODE	ILLUMINATION
ML0	none
ML2	LED

2. *How big does your clock need to be?*

SIZE

The Metroline is available in three dial diameters. The reading distance varies depending on the dial, lighting, viewing angle, etc. These are the options:

Ø	READING DISTANCE
50 cm	55-60m
60 cm	65-70m
80 cm	85-90m

3. *What shape would you like?*

SHAPE

The Metroline is available in single-sided and double-sided versions:

CODE	SHAPE
R1	round, single-sided
R2	round, double-sided

4. *The Metroline analog clock offers a variety of time code variants. Pick yours:*

TIME CODE

Code	Time code	Ø	Power supply	Hands	Movement	Max. power consumption	Accuracy (synchronized)	Loss of signal
MOBALINE SELF-SETTING: MXX								
M12	MOBALine	50–80	MOBALine	h/m/s	MLU 190t S 230	< 10mA @ 230VAC (<3W)	<+/- 100ms	12:00 position after 24 hours
M16	MOBALine	50–80	MOBALine	h/m	SAM 100t	< 20mA @ >17VAC (0.34W)	<+/- 100ms	MOBALine: 12:00 position after 24 hours DCF active: 12:00 position after 7 days
M18	MOBALine	50–80	MOBALine	h/m/s	SEM 100t	< 30mA @ >17VAC (0.51W)	<+/- 100ms	
NTP (LAN) SELF-SETTING (WITH UNICAST AND MULTICAST): NXX								
N11	NTP	50–80	PoE	h/m	NBU 190t PoE	PoEclass 2: <1.6W[3] / <3.2W[4]	<+/- 50ms	12:00 position after 24 hours
N13	NTP	50–80	PoE	h/m/s	NBU 190t S PoE			
N01	NTP	50–80	230V (24VDC)	h/m	NBU 190t 24 + PS24	< 60mA @ 24VDC (<1.44W)	<+/- 50ms	12:00 position after 24 hours
N03	NTP	50–80	230V (24VDC)	h/m/s	NBU 190t S 24 + PS24			
POLARIZED IMPULSES: IXX								
I02	Min. impulse	50–80	12–60V impulse	h/m	NU 90t	-6mA @ 24VDC (0.14W)	-	Standstill
I06	Min. impulse	50–80	12–60V impulse	h/m/s	NU 90t SYN	6mA @ 24VDC (0.14W) 10mA @ 230VAC (<2W)	-	Standstill
I21	Min. impulse	50–80	12–60V impulse 45–265VAC	h/m/s	IBU 190t S	30mA @ 230VAC (<6.9W)	-	Standstill
SERIAL: SXX								
S01	Serial	50–80	230V	h/m	SU 190t 230	50mA @ 24VDC (<1.2W) 12mA @ 230VAC (<3W)	<+/- 100ms	12:00 position after 24 hours
S03	Serial	50–80	230V	h/m/s	SU 190t S 230			
IRIG/AFNOR: TXX								
T51	IRIG/AFNOR	50–80	230V	h/m	ATBU 190t 230	10mA @ 230VAC (<2.3W)	<+/- 100ms	12:00 position after 24 hours
T53	IRIG/AFNOR	50–80	230V	h/m/s	ITBU 190t S 230			
GPS / DCF 77 / MSF / WTD WIRELESS TIME DISTRIBUTION: RXX								
R01	DCF / MSF[2]	50–80	230V	h/m	BU 190t 230	230VAC (<3W)	<+/- 100ms	12:00 position after 7 days
R04	DCF / MSF[2]	50–80	230V	h/m/s	BU 190t S 230			
R26	DCF 77[1]	50–80	Lithium battery	h/m	FU 192t	-	<+/- 100ms	12:00 position after 7 days
R29	DCF 77[1,5]	50–80	Lithium battery	h/m	FU 192t + BU 192t + CC	-	<+/- 100ms	12:00 position after 7 days
R30	DCF 77[1]	50–80	Lithium battery	h/m	BU 192t + AD 192.5	-	<+/- 100ms	12:00 position after 7 days
R31	DCF 77[1,5]	50–80	Lithium battery	h/m	2x BU 192t + AD 192.5 + CC	-	<+/- 100ms	12:00 position after 7 days
R51	GPS[6]	50–80	Lithium battery	h/m	GU 192t V2	-	<+/- 200ms	12:00 position after 53 days
R54	GPS[5 6]	50–80	Lithium battery	h/m	GU 192t V2 + BU 192t + CC	-	<+/- 200ms	12:00 position after 53 days
R80	WTD[1]	40–80	Lithium battery	h/m	BU 192t + RU	-	<+/- 100ms	12:00 position after 7 days
R88	WTD[1]	50–80	230V (24VDC)	h/m	SAM 100t + RM + PS24	230VAC (<18W)	<+/- 200ms	12:00 position after 24 hours
R90	WTD[1]	50–80	230V (24VDC)	h/m/s	SEM 100t + RM + PS24			
QUARTZ: QXX								
Q02	Quartz	50–80	Lithium battery	h/m	QU 192t	-	<+/- 4min/y[7]	-
Q03	Quartz[5]	50–80	Lithium battery	h/m	QU 192t + BU192t + CC	-	<+/- 4min/y[7]	-
CLOCK CONTROLLER (WITH ILLUMINATION CONTROL): CXX								
C01	MOBALine	50–80	230 VAC	h/m	SAM 100t + DCC	0.55A @ >230VAC (<20W)	<+/- 100ms	MOBALine: 12:00 position after 24 hours DCF active: 12:00 position after 7 days
C03	MOBALine	50–80	230 VAC	h/m/s	SEM 100t + DCC		<+/- 100ms	
C09	NTP	50–80	230 VAC/PoE	h/m	SAM 100t + NCC	0.55A @ >230VAC (<20W) PoE, class 4, <22W	<+/- 100ms	
C11	NTP	50–80	230 VAC/PoE	h/m/s	SEM 100t + NCC		<+/- 100ms	

[1] internal antenna and receiver (only for clocks without illumination) [2] without antenna, external antenna required [3] single-sided clock
[4] cascaded double-sided clock [5] for double-sided clocks, cascading cable included [6] mini magnetic antenna and receiver [7] without synchronization

For special clockwork/time code variants, see document TE-800800 at www.mobatime.com in the Customers section

5. *Choose your dial:*

DIAL

dial 120

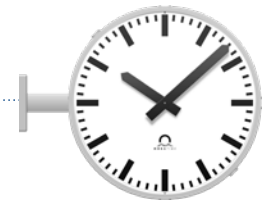
dial 300

dial 315

6. *Choose your installation:*

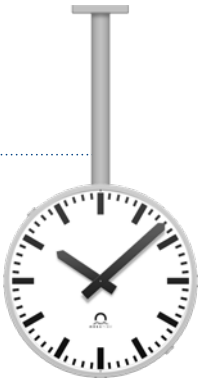
INSTALLATION

00
Wall mounting (E)
For single-sided clocks.



10
Wall bracket (WA)
For double-sided clocks.

20
Ceiling suspension (DA)
For double-sided clocks.



21 / 22 / 23
21: Ceiling suspension Ø50 (DA500)
22: Ceiling suspension Ø60 (DA600)
23: Ceiling suspension Ø80 (DA800)
For double-sided clocks.

30
Central pole mounting (ZM)
For double-sided clocks.

50
Socket mounting (S)
For double-sided clocks.

General properties

The following properties apply to all Metroline clocks:

Cover glass	Acrylic glass
Housing	Aluminium (RAL 9006)

YOUR METROLINE IS COMPLETE

You can now order your Metroline and calculate the corresponding code. Enter the abbreviation for each component of your choice in the bright field and find your Metroline code. It serves as the order code or as the foundation for further steps.

1. Illumination	Code	.
2. Size	Ø cm	.
3. Shape	Code	.
4. Time code	Code	.
5. Dial	Code	.
Glass type	Code	1 .
6. Installation	Code	.
Sequence number	Code	0000

Example order code

1.	2.	3.	4.	5.		6.	
ML0.	60.	R1.	M16.	315.	1.	00.	0000
Metroline no illumination	Ø 60cm	round, single-sided	movement SAM 100t	dial 315	acrylic glass[1]	wall suspension	sequence number[2]

[1] standard, cannot be changed
[2] The sequence number denotes special versions (e.g. clocks with a special dial). When ordering, please indicate the sequence number with 0000 (standard version); we will adapt this for any special version. Special versions can be reordered at any time stating the sequence number.

STANDARDS

Depending on the movement used in your Metroline clock, the following standards apply:

MOVEMENT(S)	STANDARDS
SAM 100t **SEM 100t**	2011/65/EU / 2014/30/EU / 2014/35/EU / 2016/797/EU / EN 50121-4 / EN 60950-1 / EN 61000-6-2 / EN 61000-6-3
NBU 190t PoE **NBU 190t S PoE** **NBU 190t 24** **NBU 190t S 24**	2011/65/EU / 2014/30/EU / 2014/35/EU / 2016/797/EU / EN 50121-4 / EN 60950-1 / EN 61000-6-2 / EN 61000-6-4
NU 90t **NU 90t SYN**	2011/65/EU / 2014/30/EU / EN 61000-6-2 / EN 61000-6-3
IBU 190t S	2011/65/EU / 2014/30/EU / 2014/35/EU / 2016/797/EU / EN 50121-4 / EN 60950-1 / EN 61000-6-3
SU 190t 230 **SU 190t S 230**	2011/65/EU / 2014/30/EU / 2014/35/EU / 2016/797/EU / EN 50121-4 / EN 60950-1 / EN 61000-6-1 / EN 61000-6-3
ATBU 190t 230 **ITBU 190t S 230**	2011/65/EU / 2014/30/EU / 2014/35/EU / 2016/797/EU / EN 50121-4 / EN 60950-1 / EN 61000-6-2 / EN 61000-6-3 / IPPS
BU 192t **FU 192t** **QU 192t**	2011/65/EU / 2014/30/EU / EN 61000-6-2 / EN 61000-6-3
BU 190t 230 **BU 190t S 230**	2011/65/EU / 2014/30/EU / 2014/35/EU / 2016/797/EU / EN 50121-4 / EN 60950-1 / EN 61000-6-1 / EN 61000-6-3
GU 192t V2	2011/65/EU / 2014/30/EU / 2016/797/EU / EN 50121-4 / EN 61000-6-2 / EN 61000-6-3
MLU 190t S 230	2011/65/EU / 2014/30/EU / 2014/35/EU / EN 50121-4 / EN 60950-1 / EN 61000-6-3

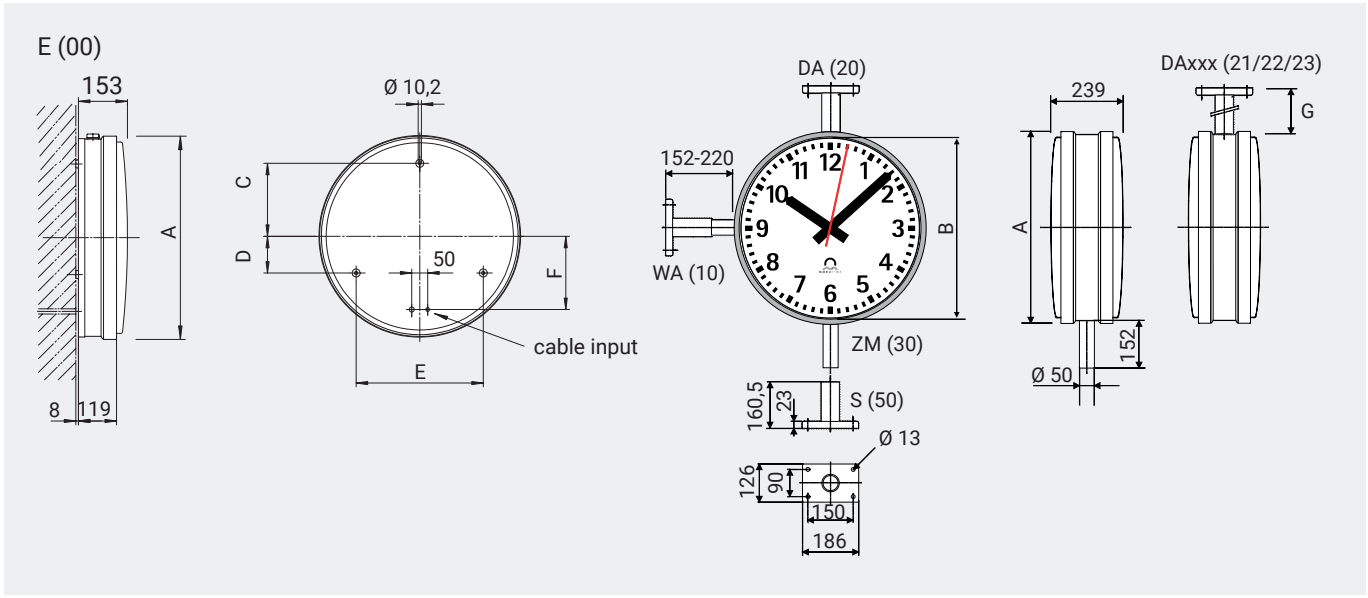
All Metroline clocks are compliant with CE, RoHS and REACH.

TECHNICAL DATA

TECHNICAL DATA	METROLINE
Operating conditions	-30 to +70 °C (0 to 95% relative humidity, non-condensing)
Degree of protection	IP 54 (option: IP 65)

	E							WA/DA/DAxxx/ZM/S	
Ø	A	B	C	D	E	F	Weight	G	Weight
50	534	500	190	95	330	190	6.8	500	12
60	634	600	230	115	400	230	8.0	600	14
80	834	800	300	150	520	300	11.0	800	18

All dimensions in mm and weights in kg.



LE-800213.25 / 2022

Do you have any questions?
We are happy to help.

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Product speci ications are subject to change without notice.

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